

Projected and Actual Traffic on Inland Waterways - Summary Fact Sheet

An Army Corps of Engineers report, [Projected And Actual Traffic on Inland Waterways](#), was prepared in August 2000 by the Corps' Institute for Water Resources at the request of the U.S. House of Representatives, Energy and Water Appropriations Subcommittee. The report presents a straightforward comparison of 15 historical forecasts of commercial traffic on ten inland waterways that comprise the major components of the fuel-taxed waterway system, including 54 percent of the system mileage and 80 percent of the system ton-miles.

The report presents the comparison of forecasted and actual traffic decade by decade for the period of time since the year of the projection, culminating with a comparison with traffic levels in 1998, which was the latest year data was available at the time the analysis was prepared.

Forecasts for the following ten waterways are presented and assessed: Ohio River; Tennessee River; Lower Mississippi River, Cairo to Baton Rouge; J. Bennett Johnston (Red River) Waterway, Mississippi River to Shreveport; Gulf Intracoastal Waterway (Leland Bowman Lock); Columbia-Snake Waterway (Columbia Portion); Missouri River; Tennessee-Tombigbee Waterway; Black Warrior-Tombigbee Navigation System; and McClellan-Kerr Arkansas River Navigation System.

The above waterways were chosen and the specific forecasts presented in the report are based on Congressional interest in "... the original waterway traffic projection for other (i.e., other than the Upper Mississippi River & Illinois Waterway) inland waterways across the nation versus the actual traffic realized for these waterways." Specific interest was expressed for historical forecasts including the traffic projected for waterways "...at the time navigation improvements were first proposed for authorization or the earliest projections available."

In order to respond to the Subcommittee request, the Corps sought historic forecasts on major inland waterways that were the closest to being either the projection used to justify a navigation improvement for authorization, or the earliest forecast available. In any event, projections reviewed are at least ten years old. This allowed for a minimum amount of time to pass after the projection was made in order to permit a meaningful comparison with actual traffic levels.

In particular, more recent forecasts made in the 1990's that are associated with projects recently authorized (i.e., construction pending or underway, but not yet complete) or just completed projects could not be included because traffic data sufficient for a reasonable post-implementation period does not exist. It was also determined that meaningful forecasts were not available for some of the earliest

projects, many of which were constructed in 19th or very early 20th Century. Therefore, previous Corps studies were sought and assessed that included traffic projections for what became the modern components of our present day inland waterway system.

The overall study results indicated that:

- About three-fourths of the projections reviewed either closely estimated (+/- 15%) or underestimated the overall level of future waterway traffic. Most objective observers would generally accept that a projection falling within 15 percent of the actual levels was "on target," especially when such forecasts were made 10 to more than 50 years in the past. Forecasts of total traffic proved to track more closely with actual navigation than component projections for individual commodities. Where the total traffic was about right, the specific mix of commodities may have varied from what was forecast.
- Several region-wide studies, such as the Ohio River Basin projections, have stood the test of time reasonably well, and there may be value to be gained by using the techniques applied in those earlier studies to future projections.
- Short-term phenomena, such as market shocks in energy prices, may unduly influence long-term projections if not recognized as short-term events. Care should be taken when forecasting long-term trends to compensate for such short-term events in the formulation of the projections. For example, projections for the Black Warrior and Tennessee-Tombigbee waterways were made at a time when U.S. coal exports were widely expected by many experts (including the Department of Energy) to continue rapid growth. However, this market - and consequently inland waterway coal export traffic - diminished due to foreign competition and domestic production subsidies by some importing nations.

The report contains no information on future projections of waterway traffic beyond the year 2000, and does not draw any conclusions in that regard. In particular, it is noted that neither this report, nor any other economic forecast by the U.S. Army Corps of Engineers (USACE) has indicated or implied that inland waterway traffic is expected to double or triple over the next 20 years.

To the contrary, USACE publications have consistently forecasted rather modest levels of traffic growth as part of recent national level short-term projections for inland waterways. These include The 1988 Inland Waterway Review, which forecasted an average annual growth rate of 1.5 percent nationally (1986-2000) with the growth rates on specific waterways ranging from 0.7 to 2.1 percent. More recently, the Corps' 1997 Inland Waterway Review forecasted a slightly lower national average annual growth rate of 1.2 percent, with specific traffic forecasts ranging from 0.8 to 1.6 percent. An ongoing study by the U.S.

Department of Transportation (DOT) is projecting inland waterway traffic growth of 1.3 percent annually through 2020, or an overall increase of about 30 percent.

No USACE official has ascertained that the Corps expects inland waterway traffic to grow at the rates needed for waterway use to double or triple by 2020. Some confusion may exist over a number of peer-reviewed federal (e.g., DOT's Marine Transportation System [MTS] initiative and various reports by USACE Institute for Water Resources [IWR]) and respected private sector forecasts that have indicated that total U.S. waterborne trade is projected to double (by tonnage) or triple (by value) by the year 2020. Such forecasts of growth are clearly driven by international trade, with foreign waterborne commerce representing the fastest growing portion of the expected increase. Such increases should not be confused with the aforementioned forecasts specifically made for U.S. inland waterways.

In closing, it should be noted that the benefit/cost framework used by all water resource agencies recognizes that forecasts are not predictions and the act of making 50-year forecasts is necessarily fraught with uncertainties that mount exponentially through the period of analysis. Benefits associated with traffic beyond 20 years into the period of analysis are so heavily discounted as to have little effect on the results of the analysis. Decision makers are also given information on project benefits under high and low traffic growth scenarios. Both discounting and presentation of benefits under alternate growth scenarios are required by regulation and are useful tools in managing the uncertainty associated with forecasting waterway traffic demands.

It is important to remember that while traffic demands are a significant consideration in benefit estimation, economic evaluations are not based upon demand forecasts alone. Corps projects are evaluated in terms of their National Economic Development (NED) benefits. Specifically, the question is asked whether the benefits provided by a project are greater than the cost of constructing and maintaining the project. If so, then the Corps recommends construction. Only the Congress and the President have the authority to approve and fund the project.